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EXAMINER

ALEMU, EPHREM

ART UNIT PAPER NUMBER

2821

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/797,110

Applicant(s)

NUMAJIRI ET AL.

Examiner

Ephrem Alemu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2004.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-15 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/11/04.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 4, 5, 8 and 11, are objected to because of the following informalities:

In claims 4 and 11, line 4, respectively, change "a threshold" with --the threshold--
-, respectively, to eliminate antecedent basis.

In claim 5, line 2, "said auxiliary lamp" lack antecedent basis.

In claim 8, line 3 and 17, respectively, "at least one light unit" and a light source",
respectively lack antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

3. Claim 2, 5, 8, 9 and 12 are rejected under 35 U.S.C. 112, second paragraph, as
being indefinite for failing to particularly point out and distinctly claim the subject matter
which applicant regards as the invention.

Re claims 2 and 9, respectively, "wherein said dimming control decreases said
effective value of said voltage applied to said light source to a threshold value over a
period of about one to two seconds" is not clear why or how the effective value of said
voltage applied to said light source to a threshold value over a period of about one to two
seconds. Is the "threshold value" claimed in claim 2 and 9, respectively, is different than
"threshold value" claimed in claim 1 and 8, respectively?

Re claims 5, 12, respectively, the limitation "wherein, when illumination of an
environment is at least a value, power is not fed to said light source of said one of said
lamp unit and said auxiliary lamp when said switching operation is performed" is not

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clear because there is no clear recitation about an auxiliary lamp and a switching operation being performed, renders the claims as claimed indefinite.

Re claim 8, the recitation “a dimming unit that controls said illumination by adjusting at least one of (a) an amount of power fed to a light source of at least one of the at least one lamp unit, and (b) an amount of power fed to a light source of said auxiliary lamp to adjust at least one of (a) a quantity of light radiated from said lamp unit and (b) a quantity of light radiated from said auxiliary lamp unit” is not clear. Is the claimed limitation the dimming unit for controlling all the “the at least one lamp unit”, “the at least one lamp unit of the headlamp” and “a light source of said auxiliary lamp”?

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3, 4, 6, 7 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Prevost et al. (US 6,176,590).

Re claims 1, 3 and 6, Prevost discloses a vehicle headlamp system including a headlamp (i.e., vehicle lighting system) and configured to control illumination of lamp units in accordance with a driving condition,

the headlamp comprising lamp units (1, 2) housed in a lamp chamber defined by a lamp body, and a front lens (not labeled), and to emit a beam ahead of the vehicle; in a light distribution pattern (Figs. 1, 2; Col. 2, lines 31-42), the system comprising:

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a dimming unit (i.e., control unit 3) that controls the illumination by adjusting an amount of power fed to a light source of at least one of the lamp units (i.e., short range driving light 2) to adjust the quantity of light radiated from the lamp unit (Figs. 1, 2, 4; Col. 2, line 46- Col. 3, line 49),

wherein the dimming unit gradually decreases an effective value of a light source applied voltage to extinguish the lamp unit, and sets the effective value of the light source applied voltage to zero in one stroke when the effective value of the applied voltage has decreased to a threshold value (i.e., V_{min}) (Figs. 1, 2, 4; Col. 2, line 46- Col. 3, line 49; Col. 5, lines 9-12; wherein the threshold value (i.e., V_{min} of the effective value of the light source applied voltage is a value within a range of about 8 volts to 9 volts).

Re claim 4, Prevost further shows the dimming control performed by the dimming unit at the time of extinction is configured to lower the effective value (i.e., $V_{max} - V_{min}$) of the light source applied voltage to the threshold value (i.e., V_{min}) along locus of an upwardly-convex-shaped continuous hyperbola (see Fig. 4).

Re claim 7, Prevost further discloses the driving condition is based on an input received from at least one of a vehicle speed sensor switch, a blinker adjustment switch, a steering angle sensor, and a beam changeover switch (Figs. 1, 3; Col. 1, lines 41-48).

Re claim 15, Prevost discloses a vehicle headlamp system (i.e., vehicle lighting system) configured to control illumination of one of a lamp unit (i.e., headlight 1) and auxiliary lamp (i.e., short range driving light 2) disposed in a vicinity of the headlamp (i.e., headlight 1), in accordance with a driving condition and to emit a beam ahead of said vehicle in a light distribution pattern (Figs. 1, 2; Col. 2, lines 31-42), comprising:

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means for controlling (i.e., control unit 3) the illumination by adjusting at least one of (a) an amount of power fed to a light source of at least one of the at least one lamp unit, and (b) an amount of power fed to a light source of the auxiliary lamp to adjust at least one of (a) a quantity of light radiated from the lamp unit and (b) a quantity of light radiated from the auxiliary lamp unit (i.e., short range driving light 2), to adjust the quantity of light radiated from the lamp unit (Figs. 1, 2, 4; Col. 2, line 46- Col. 3, line 49),

wherein the means for controlling (i.e., control unit 3) gradually decreases an effective value (i.e., $V_{max} - V_{min}$) of a light source applied voltage to extinguish at least one of the lamp unit and the auxiliary lamp, and sets the effective value of the applied voltage to zero in one stroke when the effective value of the applied voltage has decreased to a threshold value (i.e., V_{min}) (Figs. 1, 2, 4; Col. 2, line 46- Col. 3, line 49; Col. 5, lines 9-12; wherein the threshold value (i.e., V_{min} of the effective value of the light source applied voltage is a value within a range of about 8 volts to 9 volts).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prevost et al. (US 6,176,590) in view of Hayami et al. (US 6,293,686).

Re claim 5, the limitation "at least one of said lamp unit and the auxiliary lamp subjected to the dimming control operation are configured to be illuminated and

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extinguished based on a switching operation” has been interpreted as either “one of said lamp unit” or “auxiliary lamp” being illuminated or extinguished during the dimming operation.

Prevost discloses the dimming control as described in claim 1, that the dimming unit (i.e., control unit 3) that controls the illumination by adjusting an amount of power fed to a light source of at least one of the lamp units (i.e., short range driving light 2).

However, Prevost does not disclose the dimming control operation when the illumination of an environment being at least a value or more.

Hayami teaches controlling the illumination of at least one light source when an illumination of an environment being at least a value or more (i.e., when the running environment varies depending on time) (Fig. 1; Col. 3, line 55 – Col. 4, lines 3).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the dimming unit (i.e., control unit 3) of Prevost with the teaching of Hayami’s for the purpose of controlling the illumination of the at least one light source when the running environment varies depending on time to increase the visibility of the road during inclement weather condition as taught by Hayami.

8. Claims 8, 10, 11, 13 and 14, are rejected under 35 U.S.C. 103(a) as being unpatentable over Prevost et al. (US 6,176,590) in view of Ishida (US Pub. 2001/0028565).

Re claims 8, 10 and 13, the recitation “a dimming unit that controls said illumination by adjusting at least one of (a) an amount of power fed to a light source of at least one of the at least one lamp unit, and (b) an amount of power fed to a light source of said auxiliary lamp to adjust at least one of (a) a quantity of light radiated from said lamp

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unit and (b) a quantity of light radiated from said auxiliary lamp unit” has been interpreted as there are at least two lamp units within the head lamp (i.e., the at least one light unit and the auxiliary lamp unit within the headlamp) and the dimming unit is to either control the at least one light unit or the auxiliary lamp unit.”

Prevost discloses a vehicle headlamp system (i.e., vehicle lighting system) having a headlamp (i.e., headlight 1) and auxiliary lamp (i.e., short range driving light 2), and configured to control illumination of one of at least one lamp unit and the auxiliary lamp in accordance with a driving condition, the headlamp having at least one lamp unit, housed in a lamp chamber defined by a lamp body, and front lens and to emit a beam ahead of the vehicle in a light distribution pattern (Figs. 1, 2; Col. 2, lines 31-42), the system comprising:

a dimming unit (i.e., control unit 3) that controls the illumination by adjusting at least one of (a) an amount of power fed to a light source of at least one of the at least one lamp unit, and (b) an amount of power fed to a light source of the auxiliary lamp to adjust at least one of (a) a quantity of light radiated from the lamp unit and (b) a quantity of light radiated from the auxiliary lamp unit (i.e., short range driving light 2), to adjust the quantity of light radiated from the lamp unit (Figs. 1, 2, 4; Col. 2, line 46- Col. 3, line 49),

wherein the dimming unit (i.e., control unit 3) gradually decreases an effective value (i.e., $V_{max} - V_{min}$) of a light source applied voltage to extinguish at least one of the lamp unit and the auxiliary lamp, and sets the effective value of the applied voltage to zero in one stroke when the effective value of the applied voltage has decreased to a threshold value (i.e., V_{min}) (Figs. 1, 2, 4; Col. 2, line 46- Col. 3, line 49; Col. 5, lines 9-

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12; wherein the threshold value (i.e., V_{min} of the effective value of the light source applied voltage is a value within a range of about 8 volts to 9 volts).

Although, Prevost does not show both the lamp unit and the auxiliary lamp unit provided in the headlamp, providing both the lamp unit and the auxiliary lamp unit in a lamp body is well in the skill of an artisan for the purpose of minimizing the area of the lamp body by forming the one of at least one lamp unit and the auxiliary lamp integral within the head lamp.

Ishida discloses such structure (Fig. 8).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the one of at least one lamp unit and the auxiliary lamp of Prevost's by forming the one of at least one lamp unit and the auxiliary lamp integral within the head lamp for the purpose of accommodating the auxiliary lamp within the same lamp unit as disclosed by Ishida.

Re claim 11, Prevost further shows the dimming control performed by the dimming unit at the time of extinction is configured to lower the effective value (i.e., $V_{max} - V_{min}$) of the light source applied voltage to the threshold value (i.e., V_{min}) along locus of an upwardly-convex-shaped continuous hyperbola (see Fig. 4).

Re claim 14, Prevost further discloses the driving condition is based on an input received from at least one of a vehicle speed sensor switch, a blinker adjustment switch, a steering angle sensor, and a beam changeover switch (Figs. 1, 3; Col. 1, lines 41-48).

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9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prevost et al. (US 6,176,590) in view of Ishida (US Pub. 2001/0028565) further in view of Hayami et al. (US 6,293,686).

Re claim 12, the limitation “at least one of said lamp unit and the auxiliary lamp subjected to the dimming control operation are configured to be illuminated and extinguished based on a switching operation” has been interpreted as either “one of said lamp unit” or “auxiliary lamp” being illuminated or extinguished during the dimming operation.

Prevost modified by Ishida discloses the dimming control as described in claim 8, that the dimming unit (i.e., control unit 3) that controls the illumination by adjusting an amount of power fed to a light source of at least one of the lamp units (i.e., short range driving light 2).

However, Prevost modified by Ishida does not disclose the dimming control operation when the illumination of an environment being at least a value or more.

Hayami teaches controlling the illumination of at least one light source when an illumination of an environment being at least a value or more (i.e., when the running environment varies depending on time) (Fig. 1; Col. 3, line 55 – Col. 4, lines 3).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the dimming unit (i.e., control unit 3) of Prevost modified by Ishida with the teaching of Hayami’s for the purpose of controlling the illumination of the at least one light source when the running environment varies depending on time to increase the visibility of the road during inclement weather condition as taught by Hayami.

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Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Stam et al. (US 6,255,639); Neumann et al. (US 5,975,730); Heizmann (US 5,567,032); and Serezat (EP 1129899); teach similar inventive subject matter.


Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ephrem Alemu whose telephone number is (571) 272-1818. The examiner can normally be reached on M-F Flex hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don K Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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